Minutes from February 16, 2007 non-point workgroup meeting
9 VAC 25-820-10 et seq.

The meeting was held at the Piedmont Regional Office in Glen Allen, Virginia and commenced at 12:30 PM. The following persons were in attendance:

Scott Reed	Earth Source Solutions/Chesapeake Bay Nutrient Land Trust
Brent Fults	Earth Source Solutions/Chesapeake Bay Nutrient Land Trust
Shannon Varner	Troutman Sanders
Russ Baxter	DCR
Ken Carter	NRCS
Mindy Selman	World Resources Institute
Patricia Gleason	EPA Region III
Sharon Conner	Hanover Caroline SWCD
Cliff Randall	VPI-SU
John Sheehan	Aqualaw
Allan Brockenbrough	DEQ
Russ Perkinson	DCR
Kyle Winter	DEQ
Al Christopher	Virginia Clean Cities

Kyle Winter opened the meeting and summarized the progress made to date on the point source-nonpoint source trading guidance. After this, Mr. Winter received the following questions from workgroup members (answers are in italics):

How soon will DEQ make available the guidance on the operation of nutrient offset banks?

The general sequence of guidance documentation will be the completion of the point-nonpoint guidance, followed by any guidelines by which the Water Quality Improvement Fund will operate ( ), and then the banking guidance will be developed. This could take until mid-late fall.

Will DEQ be setting up a bank, either as the WQIF or through the WQIF?

We need to get a legal opinion on what is the proper authority of the WQIF before this decision is taken.

§ 62.1-44.19:15. C. of the Code of Virginia states: "Until such time as the Board finds that no allocations are reasonably available in an individual tributary, the general permit shall provide for the acquisition of allocations through payments into the Virginia Water Quality Improvement Fund established in § 10.1-2128. Such payments shall be promptly applied to achieve equivalent point or nonpoint source reductions in the same tributary beyond those reductions already required by or funded under federal or state law or the Virginia tributaries strategies plans.."

§ 62.1-44.19:18. B. of the Code of Virginia states: "Until such time as the Board finds that no credits are reasonably available in an individual tributary, the general permit shall provide for the acquisition of nitrogen and phosphorus credits through payments into the Virginia Water Quality Improvement Fund in accordance with subdivision A 2. Such payments shall be promptly applied to achieve equivalent point or nonpoint source reductions in the same tributary beyond those reductions already required by or funded under federal or state law, or the Virginia tributaries strategies plans.."

It is apparent from a reading of the law that the WQIF is the recipient of the payments made for allocations or credits. The question is how the payments are applied.

What reductions will be associated with the conversion of (non-forested) land to forested land?

Russ Perkinson will discuss these reductions shortly.

Regarding the legal requirement that new and expanding facilities need to work with landowners through a public or private third party, could farmers receive control of this arrangement?

Yes – nothing prevents the landowner from designating a farmer as his or her agent; further, nothing prevents the farmer, as "agent", from working with an aggregator or cooperative.

Russ Perkinson provided copies of the February 13, 2007 draft "Edge of Stream Nutrient Reductions per Acre for BMPs compared to Baseline Practices". The values of the respective reductions do not reflect the 2:1 trading ratio, nor do they account for the Chesapeake Bay delivery factors.

Combinations of practices listed are not purely additive; the calculations account for the fact that in considering the fate and transport of nutrients on the field, each subsequent practice imposes reductions upon a decreasing load.

Vegetative buffers at the edge of row-cropped fields and livestock exclusion areas are accounted for in the land conversion tables; the reductions achieved by buffers are reckoned to occur primarily through the conversion of land and apply to the area of land actually converted to buffer (not to the entire acreage of the field in question).

Land conversion figures assume that the land in question is already operating at the tributary strategy baseline at the time the land conversion is undertaken.

"Mixed open" fields are those that are fallow and not harvested.

The following questions/comments were posed following Mr. Perkinson's presentation:

How would impoundments/wetlands be accounted for?

This will have to be investigated further.

What effect would the new Chesapeake Bay Model (5.0) have on this?

This model is probably a year away; as long as Model 4.3 is used, we'd have to allow these reduction rates to be honored for the term of the contract.

How do these reductions compare to those proposed in Pennsylvania?

Russ Baxter noted that Pennsylvania's tributary strategy is much more dependent on agricultural reductions and in order to provide an incentive for PA agricultural producers to become involved, the PA baselines are very low – by contrast, Virginia's are very high. Practices such as poultry litter hauling would be problematic as VA already accounts for some hauling under the tributary strategy;

> *When will cleanout occur (i.e., how will shipments of litter be coordinated between generators and users) – there are a number of logistic issues to be resolved.*

Do established (albeit not to specification) exclusion and buffering practices provide a benefit "close enough to baseline" that an agricultural producer would be eligible to participate? (it's recognized that a 35' buffer doesn't provide significant reduction for wet-weather bacterial loads; future TMDLs may require a wider buffer)

This will have to be investigated further.

The reclamation/reuse regulations have been drafted and should be presented for public comment in March after the State Water Control Board meeting. In some categories of reuse, some nutrient loss to the environment is assumed. Given that new and expanding facilities may employ reclamation/reuse as a strategy to avoid discharging waste loads of nutrients (and, by extension, avoid having to acquire load reductions to offset those waste loads), we will have to identify situations in which additional BMPs may be needed for new and expanding facilities to avoid having to acquire offsets.

It was noted that given the per-acre load reductions on the 2/13 draft, a lot of acres would have to be subject to BMPs to offset the waste load from a new discharger.

Urban BMPs are not included in the 2/13 draft as they would be too specific for the development of a table listing representative load reductions. Some of these proposals may require some form of engineering analysis and may include proprietary information provided by the manufacturer of the particular BMP in question.

Patricia Gleason of EPA Region III introduced herself as the region's water quality trading coordinator. She explained EPA's approach to tracking the progress of the states in developing trading programs in accordance with their respective priorities. EPA's goal is to ensure that whatever policies and programs the states undertake are defensible with respect to reporting, contract enforceability etc.

EPA is investigating whether Virginia's effort can be supported with grant or other funding, and will assist in the development of the point-nonpoint trading guidance (not actually drafting it but helping to contract with a third party that will help draft it).

Prior to closing the meeting, DEQ took a few more questions:

How will the cost of credits/offsets be calculated? Will it remain $11 for nitrogen and $5 for phosphorus?

The enabling legislation established the cost bases for both compliance credits and load reductions to offset new and expanding discharges. DEQ followed those bases for the $11 and $5 figures in the general permit, and will revisit them when the permit is reissued in 2011-2012. The offset calculation will be more site-and tributary-specific; the information used to make that calculation will be better known by the time that WQIF is approached by permittees.

What are local governments doing with regard to offset or BMP requirements? Is there a means of exchanging ideas on this?

Nothing specific to address this has been done yet, but there are at least three ways that this could be done:

- *CBLAD could work with local governments;*
- *Local groups such as V-REMS (Virginia Regional Environmental Management System) are setting up informational clearinghouses for environmental initiatives, and the trading program could eventually be integrated into these clearinghouses;*
- *DEQ could engage local governments as part of any outreach intended to support the trading program.*

Where do we go from here?

The workgroup's next meeting will be scheduled once the drafting of the point-nonpoint trading guidance is nearly complete.

The meeting was adjourned at 2:30 PM.

2/13/07 DRAFT

Edge of Stream Nutrient Reductions per Acre for BMPs Compared to Baseline Practices

Early Planted Cover Crops

Above Fall Line			Below Fall Line		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	2.01	NA
Potomac	1.54	NA	Potomac	1.10	NA
Rappahannock	0.74	NA	Rappahannock	0.68	NA
York	0.94	NA	York	0.87	NA
James	1.04	NA	James	0.91	NA

15% Nitrogen Rate Reduction on Corn

Above Fall Line			Below Fall Line		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	5.72	NA
Potomac	3.83	NA	Potomac	4.21	NA
Rappahannock	3.40	NA	Rappahannock	2.70	NA
York	2.78	NA	York	4.12	NA
James	3.37	NA	James	3.70	NA

Continuous No_Till

Above Fall Line			Below Fall Line		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	2.40	0.39
Potomac	2.63	0.40	Potomac	1.32	0.15
Rappahannock	1.52	0.53	Rappahannock	0.86	0.12
York	1.78	0.59	York	1.08	0.17
James	2.02	0.68	James	1.13	0.19

Early Cover Crop AND 15% Nitrogen Rate Reduction on Corn

Above Fall Line			Below Fall Line		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	7.23	NA
Potomac	5.04	NA	Potomac	4.94	NA
Rappahannock	3.84	NA	Rappahannock	3.14	NA
York	3.48	NA	York	4.63	NA
James	4.12	NA	James	4.29	NA

Early Cover Crop AND Continuous No-Till

Above Fall Line			Below Fall Line		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	3.75	0.39
Potomac	3.66	0.40	Potomac	1.98	0.15
Rappahannock	1.90	0.53	Rappahannock	1.26	0.12
York	2.37	0.59	York	1.54	0.17
James	2.66	0.68	James	1.66	0.19

15% Nitrogen Rate Reduction on Corn AND Continuous No-till

Above Fall Line			Below Fall Line		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	7.54	0.39
Potomac	5.90	0.40	Potomac	5.10	0.15
Rappahannock	4.41	0.53	Rappahannock	3.28	0.12
York	4.12	0.59	York	4.78	0.17
James	4.86	0.68	James	4.46	0.19

Early Cover Crop AND 15% Nitrogen Rate Reduction on Corn AND Continuous No-till

Above Fall Line			Below Fall Line		
	TN lbs/yr	TP lbs/yr		TN lbs/yr	TP lbs/yr
E. Shore	NA	NA	E. Shore	8.89	0.39
Potomac	6.93	0.40	Potomac	5.76	0.15
Rappahannock	4.79	0.53	Rappahannock	3.68	0.12
York	4.71	0.59	York	5.24	0.17
James	5.50	0.68	James	4.99	0.19

Note: Values Do NOT include adjustment for required 2:1 nonpoint source to point source trading ratio, and do not account for delivery factors from the edge of stream to the critical areas of the Chesapeake Bay and its tidal tributaries.

For reductions generated by the implementation of buffers, see the land conversion tables: acreage represented is that land which is actually converted to buffer (area = width of buffer x length of buffer, converted to acres).

2/13/07 DRAFT

Edge of Stream Nutrient Reductions per Acre
for Land Use Conversions From Baseline Conditions

Cropland Conversion to Forest

Above Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	NA	NA
Potomac	16.05	1.05
Rappahannock	6.95	1.35
York	9.28	1.47
James	10.54	1.70

Below Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	20.70	1.96
Potomac	11.58	0.74
Rappahannock	6.51	0.62
York	8.75	0.84
James	9.34	0.93

Cropland Conversion to Hay

Above Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	NA	NA
Potomac	8.49	0.75
Rappahannock	6.56	0.47
York	2.76	0.54
James	7.79	0.83

Below Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	5.48	0.71
Potomac	6.40	0.26
Rappahannock	0.69	0.09
York	2.39	0.27
James	3.45	0.36

Cropland Conversion to Mixed Open

Above Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	NA	NA
Potomac	12.24	0.43
Rappahannock	4.94	0.73
York	6.21	0.71
James	6.61	0.46

Below Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	14.87	0.23
Potomac	8.55	0.08
Rappahannock	3.86	-
York	4.48	-
James	3.08	-

Hay Conversion to Forest

Above Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	NA	NA
Potomac	6.66	0.79
Rappahannock	6.31	0.98
York	5.51	0.95
James	6.31	1.36

Below Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	10.52	2.18
Potomac	4.64	0.68
Rappahannock	5.83	1.04
York	5.60	1.06
James	13.35	2.16

Hay Conversion to Mixed Open

Above Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	NA	NA
Potomac	2.85	0.17
Rappahannock	4.31	0.36
York	2.44	0.19
James	2.39	0.12

Below Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	4.69	0.46
Potomac	1.61	0.02
Rappahannock	3.17	0.38
York	1.33	0.11
James	7.09	0.47

Impervious Urban Conversion to Forest

Above Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	NA	NA
Potomac	5.18	0.48
Rappahannock	5.22	0.50
York	5.39	0.49
James	5.34	0.48

Below Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	10.95	1.01
Potomac	4.98	0.43
Rappahannock	5.53	0.49
York	5.59	0.49
James	5.55	0.49

Pervious Urban Conversion to Forest

Above Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	NA	NA
Potomac	7.57	0.87
Rappahannock	4.90	0.88
York	6.48	1.07
James	8.01	1.75

Below Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	11.76	2.43
Potomac	6.89	1.08
Rappahannock	5.64	0.94
York	8.33	1.35
James	11.68	2.36

Pasture Conversion to Forest

Above Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	NA	NA
Potomac	1.34	0.41
Rappahannock	1.22	0.49
York	3.03	0.80
James	1.29	0.70

Below Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	3.50	1.36
Potomac	2.85	0.85
Rappahannock	2.30	0.67
York	3.24	0.95
James	13.33	1.74

Mixed Open Conversion to Forest

Above Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	NA	NA
Potomac	3.81	0.62
Rappahannock	2.00	0.62
York	3.08	0.76
James	3.93	1.24

Below Fall Line Land Use Conversion Credits

	TN lbs/yr	TP lbs/yr
E. Shore	5.83	1.72
Potomac	3.03	0.65
Rappahannock	2.66	0.67
York	4.27	0.96
James	6.26	1.68

Note: Values Do NOT include adjustment for required 2:1 nonpoint source to point source trading ratio and do not account for delivery factors from the edge of stream to the critical areas of the Chesapeake Bay and its tidal tributaries.